

**ENVR/PHNU 423: Industrial Medicine and Toxicology  
Course Syllabus**

**Spring 2015**

Classes begin Wednesday, January 7, 2015 and end Friday, April 24, 2015

**Faculty: Woodhall Stopford, MD**

Duke Occupational and Environmental Medicine, DUMC  
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**Course Prerequisites:** None

**Credits:** 3

**COURSE DESCRIPTION**

Toxicological assessment of and a case presentation of related exposure is given. A conceptual approach is utilized to design appropriate programs to prevent worker ill health due to industrial toxicant exposure.

**OBJECTIVES**

1. Develop basic problem solving skills necessary to assess occupational and environmental concerns.
2. Utilize practitioners with expertise in industrial hygiene, nursing, epidemiology, occupational medicine, and toxicology when evaluating exposure situations.
3. Apply epidemiological, toxicological, industrial hygiene, and management skills in the problem solving process through the use of case studies.
4. Develop competency in how to obtain more information to be able to adequately address occupational and environmental issues.

**REQUIRED TEXT/READINGS**

LaDou, J. (2014). *Current Occupational & Environmental Medicine* (5<sup>th</sup> Ed.). New York: Lange Medical Books/McGraw-Hill.

Additional readings (pdf) are provided on the Sakai website; they can be found under Course Information, Readings. All required readings are marked with an asterisk (\*). Other listed readings are for additional information if you are interested or having difficulty with the topic.

**ALTERNATE REFERENCES**

Rom, W.N., & Markowitz, S.B. (2007). *Environmental and Occupational Medicine*. (4<sup>th</sup> Ed.). Lippincott Williams & Wilkins.

Zenz, C. & Dickerson, O. B, & Horvath, E.P. (1994). *Occupational Medicine* (3<sup>rd</sup> Ed.). Mosby.

Klaassen, C.D. (Ed.). (2007). *Casarett and Doull's Toxicology: The Basic Science of Poisons* (7<sup>th</sup> Ed.). McGraw-Hill.

### **TEACHING METHODS**

Lectures  
Chat Sessions/Discussions  
Individual/Group Work

### **CHAT SESSIONS**

Chat sessions will be held every other week on Blackboard at a time mutually decided by faculty and students, typically a weekday evening for one hour. A case study will be posted ahead of time which faculty will expect students to have read and be prepared to discuss. After the chat session, the transcript will be available for your reference.

### **EVALUATION**

<b>Evaluation</b>	<b>Percent of Grade</b>	<b>Assignment Due</b>
<b>Midterm Exam (take home/open book):</b> Approach to a specific exposure problem	30%	March 16, 2015 (available March 2)
<b>Powerpoint Slide Paper:</b> ▪ Guidelines are listed below	20%	April 15, 2015
<b>Final Exam (take home/open book):</b> Multiple choice and short essays based on case histories	50%	May 5, 2015 (available April 27)
<b>Course Evaluation (required)</b>	N/A	End of course

### **GUIDELINES FOR PAPER**

Students will be asked to submit topics for their PowerPoint Paper to Dr. Stopford and Susan Randolph, which will be posted on Sakai. Two to four (2-4) students can work as a team to evaluate one chemical exposure situation or process. Please review your topic with Dr. Stopford before beginning the assignment. Some previous papers are posted on Sakai to give you an idea of what is expected.

The paper should address the following components:

- General toxicity of chemical(s) where an exposure may occur
- Exposure assessment: where can an over-exposure occur
- Monitoring program (both medical/epidemiological and industrial hygiene) for the examined situation
- Measures that can be taken to prevent excessive exposure

The paper should be presented as a PowerPoint slide presentation; the presentations will be posted for all students to review.

## **HONOR CODE**

The University of North Carolina at Chapel Hill has had a student-administered honor system and judicial system for over 100 years. The system is the responsibility of students and is regulated and governed by them, but faculty share the responsibility. If you have questions about your responsibility under the honor code, please bring them to your instructor or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system. Your full participation and observance of the honor code is expected.

Information about the Honor Code is listed in the Student Handbook. All written work should be submitted with the following pledge with your signature: “On my honor, I have neither given nor received unauthorized aid on this assignment.”

## **VALUING DIVERSITY**

Promoting and valuing diversity in the classroom enriches learning and broadens everyone’s perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that occurs in this course. This may challenge our own closely held ideas and personal comfort zones. The results, however, create a sense of community and promote excellence in the learning environment.

Diversity includes consideration of (1) the variety of life experiences other have had, and (2) factors related to “diversity of presence”, including, among others, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, social position.

This class follows principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

The University of North Carolina at Chapel Hill is committed to equality of educational opportunity. The University does not discriminate in offering access to its educational programs and activities on the basis of age, color, creed, disability, gender, gender expression, gender identity, genetic information, national origin, race, religion, sex, sexual orientation, or veteran status. The Equal Opportunity and Compliance Office (100 E. Franklin Street, Unit 110, CB #9160, Chapel Hill, NC 27599-9160 or (919) 966-3576) has been designated to handle inquiries regarding the University’s non-discrimination policies. <http://policies.unc.edu/policies/nondiscrim/>

## **EXPECTATIONS**

Students completing this course will develop basic problem solving skills necessary to assess occupational and environmental concerns. This course is based on case studies and will give students opportunities to interact with students in various occupational health disciplines. These case studies will demonstrate the usefulness of epidemiological, toxicological, industrial hygiene and management skills in the problem solving process. Although the content portion of this course focuses on toxicology and industrial medicine, it is an expectation that these same problem solving skills will be useful in addressing any occupational or environmental health issue. Students will be able to utilize effectively practitioners with expertise in the areas of industrial hygiene, epidemiology, industrial medicine and toxicology when addressing such problems. Students will develop competencies in how to obtain more information to be able to adequately address concerns.

### **OTHER**

1. By enrolling as a student in this course, you agree to abide by the UNC-Chapel Hill policies related to the Acceptable Use of online resources. Please consult the Acceptable Use Policy (<http://help.unc.edu/1672>) on topics such as copyright, net-etiquette, and privacy protection.
2. As part of this course, you may be asked to participate in online discussions or other online activities that may include personal information about you or other students in the course. Please be respectful of the rights and protection of other participants under the UNC-Chapel Hill Information Security Policies ([http://its.unc.edu/ITS/about\\_its/its\\_policies/index.htm](http://its.unc.edu/ITS/about_its/its_policies/index.htm)) when participating in online classes.
3. When using online resources offered by organizations not affiliated with UNC-Chapel Hill, such as Google or Youtube, please note that the Terms and Conditions of these companies and not the University's Terms and Conditions apply. These third parties may offer different degrees of privacy protection and access to rights to online content. You should be well aware of this when posting content to sites not managed by UNC-Chapel Hill.
4. When links to sites outside of the unc.edu domain are inserted in class discussions, please be mindful that clicking on sites not affiliated with UNC-Chapel Hill may pose a risk for your computer due to the presence of malware on such sites.

### **GRADING SCALE**

H/A:	93-100
P/B:	85-92
L/C:	80-84
F:	Fail (below 80)